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ABSTRACT

A 67 percent response was obtained from 2,165 graduates of three types of vocational programs who were surveyed approximately 18 months after graduation to determine and compare their degree of satisfaction with their high school programs and their jobs, programs are: (1) total in-school vocational program; (2) Capstone program--in-school vocational training followed by cooperative work experience in the senior year; and (3) diversified occupations program--total cooperative work experience with school programed related theory. Results of an employer questionnaire indicated satisfaction with the work produced by graduates from the different programs. The procedures and techniques used in collecting the data for this survey are discussed and the findings are described in detail. The findings showed that graduates of vocational programs had a much lower unemployment rate than did the national average of all high school graduates, with Capstone graduates having the lowest unemployment rates. Graduates from total in-school programs did least well in terms of obtaining and keeping employment, pay, job satisfaction, and employer satisfaction. Comments from graduates and employers and the graduate and employer questionnaires are appended. (Author/EC)

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AN EVALUATION OF COOPERATIVE VOCATIONAL EDUCATION PROGRAMS IN PENNSYLVANIA

James M. Slick
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Pennsylvania Department of Education
Bureau of Vocational Education
Cooperative Vocational Education (Part G)
(Project No. 30-5019)

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AN EVALUATION OF COOPERATIVE VOCATIONAL EDUCATION PROGRAMS IN PENNSYLVANIA

by

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and

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University Park, Pennsylvania

June, 1974

Pennsylvania Department of Education
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PREFACE

Cooperative education has, since the passage of the 1968 Vocational Education Amendments, been in a state of rapid expansion. The 1968 Amendments gave priority for cooperative programs to areas where there were high rates of school drop-outs and youth unemployment. The concept behind this priority was that the students would stay in school, learn a trade and become employable. Thus they would be removed from the unemployment rolls.

There has been, for many years, much consideration and debate of the true value of the cooperative education approach. Yet this approach has had rapid expansion at the secondary and post-secondary levels. Some of the new growth and expansion comes from Part G funding under the 1968 Amendments. This raises further questions to the value of coop, are programs being expended because they are good and needed or because there are existing federal funds available.

This study attempted to look at secondary cooperative education in its two forms, capstone and diversified occupation. These approaches were compared with traditional in-school vocational programs. This study will give a strong comparison of the three vocational approaches, thus providing vocational educators with the value or lack of value of cooperative education.

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TABLE OF CONTENTS

		Page
PREFACE		ii
ACKNOWLEDGMENTS		iii
LIST OF FIGURES		vi
REPORT CAPSULE		vii
Chapter I.	INTRODUCTION	1
	Background Information	1
	The Problem	3
Chapter II.	REVIEW OF RELATED LITERATURE	5
	Introduction	5
	Review of Related Literature - Cooperative Vocational Education	5
	Review of Related Literature - The Theory of Work Adjustment, Work Satisfaction, and Work Satisfactoriness	9
Chapter III.	PROCEDURES	13
	Introduction	13
	Survey Population	13
	Data Gathering Techniques	16
	Graduate Questionnaire	16
	Identifier	17
	Demographic Data	18
	Occupational Program/Occupation	18
	Satisfaction (Job)	18
	Satisfaction (High School/Occupational Program)	18
	Additional Survey Information	18
	Employer Questionnaire	19
	Data Analysis	19
Chapter IV.	LIMITATIONS	21
Chapter V.	FINDINGS	23
	Graduate Survey	23
	Employer Survey	33
Chapter VI.	SUMMARY AND RECOMMENDATIONS	39
	Summary	39
	Recommendations	40
REFERENCED BIBLIOGRAPHY		42
	Statistical Bibliography	43
APPENDIX A:	Representative Comments From Graduates and Employers	44
	Graduates' Comments	45
	Employers' Comments	53

Page

APPENDIX B: Letters of Transmittal - Graduate Survey. 56

APPENDIX C: Graduate Questionnaire. 60

APPENDIX D: Letter of Transmittal - Employer Survey 63

APPENDIX E: Employer Questionnaire. 65

LIST OF FIGURES

Page

Figure 1 - Program for Evaluation of Cooperative Education. . . 14

REPORT CAPSULE

Two thousand one hundred sixty-five graduates (class of 1972) of three types of vocational programs were surveyed to determine their degree of satisfaction with their high school programs and their jobs, and to obtain a description of their progress in the world of work. The three types of programs were: 1) Total in-school vocational training, no cooperative work experience. (Total in-school vocational program.) 2) In-school vocational training followed by cooperative work experience in the senior year. (Capstone program.) 3) Total cooperative work experience with school programmed related theory, no in-school vocational training. (Diversified occupations program.) With the permission of the graduates, their employers were also surveyed. The employer questionnaire dealt with their reasons for hiring these people and their satisfaction with the three types of program graduates. Overall the findings were very supportive of vocational education, especially in the area of employment. The results of this survey showed that graduates of vocational programs had a much lower unemployment rate than did the national average of all high school graduates, with the capstone graduates having the lowest unemployment rate of the three vocational programs examined by this study. Though overall the results were good, there were, as one might expect, areas where there were wide differences. In general the coop students, both capstone and diversified occupations (DO) were more satisfied with the training provided by the combination of school and employment. They generally obtained their jobs before leaving school, were more satisfied with the various aspects of their

job, and were paid more ($20 per week). They were more satisfied with the challenges and adjustments made on their job, and would recommend their programs to close friends and relatives more so than the graduates of the total in-school vocational programs. The employers of the capstone and DO graduates rated these employees very high and felt they demonstrated a high degree of skill when hired. They agreed that the coop graduates could work with less supervision, were more cooperative and progressed faster on the job than did the graduates of the total in-school program with no cooperative aspects. The employers of the diversified occupations program graduates felt that 80 percent of these employees were in the top quarter in comparison with other employees doing similar tasks.

Diversified occupations and capstone students had nearly twice the probability of being employed before graduating from high school than did the total in-school group. Of those students in the capstone program who did not have jobs at graduation, 50 percent were able to obtain their first job within a two week period following graduation. This compares to 24 percent for the total in-school program graduates and 14 percent for the DO program graduates for the same time period. Forty percent of the total in-school graduates did not have a job eight weeks following graduation. The capstone and diversified occupation students had fewer job changes in the two year period since graduation. Twice as many cooperative education program graduates, both DO and capstone, received assistance in finding their first job than did the total in-school vocational program graduates. Two years after graduation the findings were that the majority of those earning

over $200 per week were cooperative program graduates, and the majority of those earning less than $100 per week were graduates of the total in-school programs.

All in all, much more consideration must be given to the future of the cooperative approach to vocational education. This study clearly indicates a strong positive reaction to cooperative education over the total in-school vocational program. There are a significant number of written comments which appear in Appendix A. Those comments by the total in-school program graduates were generally negative to their educational process especially when discussing their vocational programs.

Chapter I

INTRODUCTION

Background Information

With the passage of the Vocational Education Act of 1963, and the Amendments of 1968 much attention was focused upon the need for more occupational education programs at the high school and post-high school levels. This need is further emphasized when one examines the Statistical Abstract of the United States for the Year 1973 (10). It is noted there that only 20 percent of the youth entering the labor market are in jobs requiring a baccalaureate degree. Therefore, approximately 80 percent of those who enter the labor market have a need for vocational education programs. Moreover our technical society demands not only a large number of programs, but those of the highest quality.

A major question facing vocational education was and is, "How can we provide occupational education appropriate to the needs, interests, and abilities of young people to prepare them to enter gainful employment, progress on the job and cope effectively with changing technology?" In response to this question, vocational education has developed many new programs employing different approaches to instruction. They include shop laboratory experiences, individualized instruction, self-taught units, modular instruction, small and large group instruction, and the cooperative approach.

The cooperative approach has received, and is receiving much attention by academic and vocational administrators alike. Cooperative education is defined in Section 175 of the 1968 Amendments to the

Vocational Education Act of 1963 as "a program of vocational education for persons who, through a cooperative arrangement between the school and employers, receive instruction, including required academic courses and related vocational instruction by alternation of study in school with a job in any occupational field, but these two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his employability. Work periods and school attendance may be on alternate half-days, full-days, weeks, or other periods of time in fulfilling the cooperative work-study program."

Cooperative education is being adopted on a very large basis throughout the State of Pennsylvania. Most area vocational technical schools (AVTS), now employ cooperative programs as a "capstone" to their traditional in-school vocational program, with a majority of the vocational disciplines integrating this approach into their curriculum. With the "capstone" approach the in-school vocational training is climaxed by cooperative on the job training. Many high schools have started or are contemplating starting a cooperative education program that will offer training in diversified occupations (DO). These DO programs combine the cooperative work experience with school programmed related theory. This arrangement permits the offering of vocational programs in schools that do not have the required training facilities. With the DO program there is usually no prior in-school vocational training, thus most of the instruction is done on the job.

An examination of the literature related to the cooperative approach shows many apparent benefits. McCracken (8) summarizes the major strengths of cooperative vocational education as follows:

1. A favorable cost-benefit ratio.
2. Flexibility of scheduling of operation.
3. A broadening of occupational offering.
4. Job-oriented training programs.
5. Reduction of unemployment in those completing the program.
6. Development of work reputation in students.
7. Improvement of student motivation.
8. Improvement of school-industry cooperation.

These and other factors make the cooperative approach attractive, but there is little evidence to substantiate the value of this approach over any other.

There is a need to determine the relative merits of the cooperative approach when compared to the regular in-school vocational type program. There is also a need to evaluate the various types of cooperative programs. These needs are particularly evident in light of the present and anticipated growth in cooperative education programs and the large number of students, money, and energies that will be involved in these programs.

The Problem

The purpose of this study was to compare the benefits of cooperative vocational programs, in-school vocational programs, and combinations of these programs. Specific areas of concern were:

1. The degree of student satisfaction with their high school program.
2. The degree of student satisfaction with their present employment.

3. The degree of employer satisfaction with the graduates of the respective programs.
4. Demographic data related to the students post-high school experiences.

Chapter II

REVIEW OF RELATED LITERATURE

Introduction

The purpose of this study was to investigate the relative merits of the various types of cooperative programs when compared to the regular in-school vocational type program. As a basis for assessment the following criteria were compared:

1. Student satisfaction with their school program and their job.
2. Employer satisfaction with the graduates of the respective programs.
3. Student employment data.

In order that this study might be placed in a proper perspective a review of the related literature was undertaken.

The literature reviewed in this chapter was characterized under the following headings:

1. Review of related literature - cooperative vocational education
2. Review of related literature - the theory of work adjustment, work satisfaction, and work satisfactoriness.

Review of Related Literature - Cooperative Vocational Education

Cooperative vocational education is by no means a newcomer to the American educational scene.

> The roots of cooperative education are found in the activities of certain engineering colleges in the early 1900's. The University of Cincinnati and its Dean Schneider are credited with the development of a plan for giving engineering students practical job experience, mainly with local machine manufacturers. As early as 1915, ten New York City high schools introduced experimental

> cooperative programs. Other isolated or sporadic attempts at school and work programs were attempted, mainly in some of the larger city high schools. A complete, if temporary, demise of all such efforts was brought on by the great American depression, and it was not until after the end of World War II that the widespread development of cooperative education programs was resumed (6).

The Pennsylvania Department of Education in its Guidelines to Initiate and Operate a Cooperative Vocational Education Program presented the following definition of and purposes for cooperative vocational education:

> The basic purpose of cooperative vocational education is to provide occupational training through the use of business and industrial concerns and to help bridge the gap between school and employment. Cooperative vocational education programs take a school curriculum beyond the four walls of the high school and use the community as its classrooms. The facilities of the local business and industries are used for the vocational classroom and local craftsmen are the instructors. It offers the blending of high school instruction with on the job experience. Training is offered where regular preparatory training could not be offered. It is also used as a capstone activity in a traditional vocational program. Cooperative vocational education cannot only offer a variety of occupational areas but can also accommodate many levels of training from semi-skilled to the technician level. The program can provide training at the junior high school, senior high school, post-secondary, and the adult level (1).

The Committee on Labor and Public Welfare of the United State Senate in 1968 appraised the cooperative approach to education. They stated:

> The part-time cooperative plan is undoubtedly the best program we have in vocational education. It consistently yields high placement records, high employment stability and high job satisfaction. Students cannot be trained faster than they can be placed. The availability of training stations with employers is limited to the need of the employer (1).

There are, however, some areas of concern with cooperative programs. Cooperative education is susceptible to business recessions,

since a smaller choice of jobs would reduce its educational potential. Stewart Collins in discussing the promises and pitfalls of cooperative education noted that:

> The very nature of its mechanics, students alternating periods of academic terms with periods of full-time employment, means to many employers that cooperative students are hired under the heading of "temporary personnel". When employment cutbacks have to occur, cooperative students appear to be either easily laid off or not rehired the next time they are available for employment. This can and will happen despite the best-laid plans of employers, students and coordinators of such programs. It particularly happens with larger employers where the decision-makers possibly do not even know that such students are on the rolls, much less know them as individuals.
>
> Those of us who are involved in cooperative education really do not expect an employer to hire as many students during a recession as he would normally. On the other hand, coordinators do not expect to have the total program removed under such conditions, but would rather expect that some attrition should take place perhaps proportionate to the cutbacks of the regular employees (3).

It has been noted that ..."in recessive times the ability of the graduate of a cooperative program to secure a permanent position is actually very high compared to those graduated who do not have experience" (3).

A cooperative program should however include alternate plans for students in the event that they are laid off due to an unusual circumstance such as a business slump (5).

Another area of concern in cooperative education is the relationship of the student and the money he is paid as a salary for his employment. It is one of the most attractive reasons for a student to become involved with cooperative education as it may well provide him with the means for carrying on his education. However, in criticism this financial incentive can overpower his rationality in job selection.

There is a great danger that if given a choice the student will select employment which is more rewarding financially instead of a lower paying position which might be more educational or interesting. Cooperative education probably attracts some students who must or prefer to value financial income more than learning situations. If so it is the emphasis the individual chooses rather than the fault of the cooperative program. As the program itself represents a refreshing laboratory of experimentation the student must be spurred by those in charge to derive as many benefits from the experience as possible (3).

Most vocational authorities agree that the success or failure of the cooperative education program rests with the coordinator. The coordinator is the key link between the employer and the employee. It is his constant supervision that prevents program misdirection. The Pennsylvania Guidelines for Cooperative Education noted that:

> The majority of employers are willing and enthusiastic about working with the school in developing the student, but proper supervision is necessary to prevent an employer from offering only limited training or encouraging the student to quit school and work full time (1).

The preceding paragraphs have eluded to the purposes, promises, and pitfalls of cooperative vocational education. John Struck, Pennsylvania State Director of Vocational Education, with the following statement emphasized the need:

> Vocational shops and laboratories can be provided only where a reasonable number of people are available to benefit from such an offering. Cooperative Vocational Education is an excellent technique to expand and extend the occupational training opportunities available to meet the needs and interests of many more students than the occupational training opportunities available to meet the needs and interests of many more students than those being trained today (1).

Review of Related Literature - The Theory of Work Adjustment, Work Satisfaction, and Work Satisfactoriness.

In 1968, Dawis, Lofquist and Weiss (4) published a theory of work adjustment which was based on the concept of correspondence between an individual and his environment. The individual brings into this relationship his requirements of the environment. At the same time the environment to which the individual enters imposes certain requirements upon him. In order to survive, the individual and his environment must achieve some degree of correspondence. It is then a basic assumption of this theory of work adjustment that each individual seeks to achieve and maintain correspondence with his environment.

There are several kinds of environment (home, school, work, etc.) to which an individual must relate. Therefore achieving and maintaining correspondence with one environment may effect the correspondence with which one achieves and maintains in another environment. Work represents a major environment to which most individuals must relate. Into the work environment the individual brings certain occupational skills. These skills enable the individual to respond to the requirements of the work environment. The rewards provided by the work environment enables it to respond to the requirements of the individual. When the requirements of the individual and of the work environment are mutually fulfilled the individual and the work environment are described as correspondent. In a case of work then, correspondence can be described in terms of the individual fulfilling the requirements of the work environment and the work environment fulfilling the requirements of the individual.

When an individual enters a work environment for the first time, his behavior is directed toward fulfilling its requirements. He also experiences the rewards provided by the work environment. If the correspondence between the individual and the work environment exists, he seeks to maintain it; if he fails to find correspondence, he seeks to establish it; or failing in this attempt, he will leave the work environment.

The stability of correspondence between the individual and the work environment is manifested as tenure on the job. The achievement of minimal correspondence enables an individual to remain in a work environment. Remaining in the work environment inturn allows the individual to achieve more optimal correspondence and to stabilize the correspondent relationship. As correspondence increases the probability of tenure increases and the projected length of tenure increases as well. Conversely, as correspondence decreases both the probability of remaining on the job and the projected length of tenure decreases. Tenure is the most basic indicator of correspondence. It can be said that tenure is a function of correspondence between the individual and his work environment.

From the outcome of correspondence and tenure, Dawis, et al. (4) added the concepts: satisfaction and satisfactoriness. If the individual has substantial tenure, it can be inferred that he has been fulfilling the requirements of the work environment. If the individual fulfills the requirements of the work environment he is defined as a satisfactory worker on the other hand if the work environment fulfills the requirements of the individual he is considered to be a satisfied worker. Therefore satisfactoriness and satisfaction indicates a correspondence between the individual and his work environment.

Satisfactoriness and satisfaction then are basic indicators of the degree of success an individual has achieved in maintaining correspondence between himself and his work environment. Satisfactoriness is an external indicator of correspondence. It is derived or obtained from sources other than the individual worker's appraisal of his fulfillment of the requirements of the work environment. Satisfaction on the other hand is an internal indicator of correspondence. It presents the individual worker's appraisal of the extent to which the work environment fulfills his requirements.

Robertson (9) conducted a follow-up study of cooperative and non-cooperative education graduates from a single high school. He was interested in determining if the experience graduates gained while enrolled in a cooperative education program would enable them to express a significantly higher degree of job satisfaction as compared to non-cooperative education graduates. He reported no significant difference between the two groups.

Matteson (7) in a study limited to Wisconsin Vocational Agricultural programs reported a higher percentage of expressed degree of job satisfaction by graduates who were employed in jobs for which they had trained for in secondary schools. On the other hand those graduates who were employed in jobs unrelated to their training expressed a lower degree of job satisfaction.

Carlson, Dawis, England, and Lofquist (2) conducted a study to develop criteria majors of employment satisfactoriness. Their study defined satisfaction and satisfactoriness in the following manner:

> "Satisfaction" consists of those variables which represent the individual's view of his "work adjustment." These variables reflect the individual's evaluation of

his work situation in terms of how satisfied he is with the many aspects of work, e.g., the type of work activity he engages in, the people he works for and with, the conditions under which he works, compensation he receives for his work. These variables might then be considered as reflecting the extent to which the individual's expectations concerning work have been fulfilled.

"Satisfactoriness" includes those variables which represent the employer's view of the individual's "work adjustment." The employer presumably is concerned with the individual primarily as an employee. That is, the employer views the individual's "work adjustment" mainly in terms of how well he performs his job. Thus the employer's view provides an organizational criterion while the individual's view represents an individual criterion.

"Satisfaction" and "satisfactoriness" are therefore separate, although not unrelated, classes of criteria. To be meaningful, they must refer specifically to one particular job of the individual. That is to say, "satisfaction" should more accurately read "satisfaction-with-this-job" and "satisfactoriness" should be "satisfactoriness-on-this-job." To be even more precise, "satisfaction" and "satisfactoriness" should refer to a specific time-point during the individual's tenure on the job. The pattern of satisfaction-satisfactoriness on one job indicates "job adjustment," while the pattern of satisfaction-satisfactoriness over all jobs reflects "work adjustment." Thus, the concept of "job adjustment" may be advanced as distinct from, but part of, "work adjustment."

"Satisfaction" and "satisfactoriness" are evaluative criteria. As such, employment decisions and actions may result from them. Promotions, transfers, quits and firings are examples of such decisions and actions. Patterns of these decisions and actions and the work history of the individual are significant indicators of work adjustment.

Chapter III

PROCEDURES

Introduction

The purpose of this study was to make a comparative evaluation of three types of vocational education programs:

1. Total in-school vocational training, no cooperative work experience. (Total in-school vocational program.)
2. In-school vocational training followed be cooperative work experience in the senior year. (Capstone program.)
3. Total cooperative work experience with school programmed related theory, no in-school vocational training. (Diversified occupations program.)

The data utilized in the evaluation of these programs was obtained as a result of surveys involving the program graduates and the employers of these graduates. The basic approach to the surveys and the evaluation of the results is outlined in Figure 1.

Survey Population

The study focused on the graduating class of 1972, therefore the students involved in this study were surveyed approximately 18 months after graduation. The year 1972 was selected as the earliest year that could provide a relatively large sample of students who had graduated from the three types of vocational education programs being evaluated in this study. Much consideration was given to the time span between graduation and survey so that a maximum of information might be available as a basis for determination of graduate satisfaction and satisfactoriness.

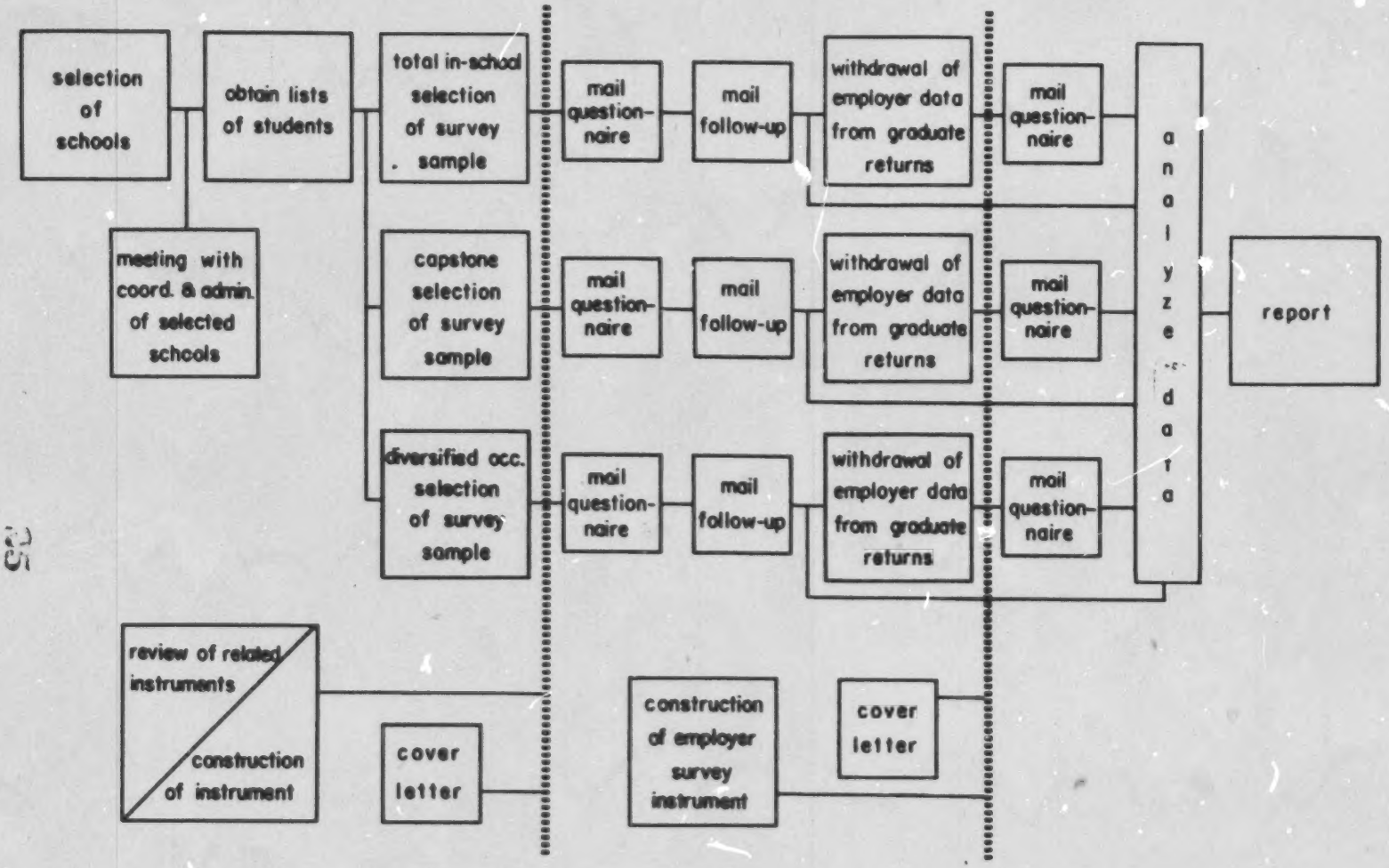

Figure 1. Program for Evaluation of Cooperative Education

The schools selected for this survey would be among those who, in the spring of 1972, had represented in their graduating class those who had completed the total in-school vocational program and those who had completed one of the cooperative vocational education programs.

With the above criteria in mind, and with the consent and cooperation of the school administration and staff, seven Pennsylvania schools were selected to participate in the survey. The schools were:

1. Altoona Area Vocational Technical School
2. Lancaster County Area Vocational Technical Schools
    a. Brownstown
    b. Mount Joy
    c. Willow Street
3. Lebanon County Vocational Technical School
4. Lehigh County Vocational Technical School
5. Tyrone Area High School

The number of graduates from vocational programs in these schools varied from 75 to 539, with the total number of vocational program graduates from the seven schools being 2,165. This entire vocational program population (2,165) was surveyed.

From this parent population of 2,165, two sub-populations were identified:

1. Vocational Programs
    a. Total in-school vocational training
    b. Capstone program
    c. Diversified occupations program
2. Curriculum
    a. Agriculture

b. Business Education

c. Distributive Education

d. Health

e. Home Economics

f. Trade and Industrial

The identification of vocational program graduates was, of course, necessary to permit a comparative evaluation. The identification of the curriculum sub-population permits a within program examination, and a more detailed comparison.

It is felt that the vocational programs offered in these seven schools are representative of programs offered in most high schools in Pennsylvania. However, the variability in such parameters as individual preferences, school philosophies, and economic conditions would tend to encourage caution when making generalizations beyond the framework of this study.

Data Gathering Techniques

The follow-up questionnaires used in this study were directed to the graduates of the three types of vocational programs being examined by this study, and the employers of those graduates.

Graduate Questionnaire

This survey instrument (Appendix C) was constructed to provide: a demographic profile of the graduate, information related to the graduates satisfaction with his high school program and his present job, and information dealing with the relationship between the graduates program and his present job.

Identifier. This questionnaire utilized an eight digit "identifier" to provide a basis for analysis within this study. The following information is contained in the identifier.

DIGIT 1 - SCHOOL IDENTIFICATION

1 - Altoona Area Vocational-Technical School

2 - Brownstown (Lancaster County Area Vocational Technical Schools)

3 - Lebanon County Area Vocational-Technical School

4 - Lehigh County Vocational-Technical School

5 - Mt. Joy (Lancaster County Area Vocational Technical Schools)

6 - Tyrone Area High School

7 - Willow Street (Lancaster County Area Vocational Technical Schools)

DIGITS 2, 3, 4 - STUDENT IDENTIFICATION

Example: 001 - 516

DIGITS 5, 6 - GRADUATION YEAR (72)

DIGIT 7 - PROGRAM TYPE

1 - Total in-school vocational training program

2 - Capstone program

3 - Diversified occupations program

DIGIT 8 - CURRICULUM

1 - Agriculture

2 - Business Education

3 - Distributive Education

4 - Health

5 - Home Economics

6 - Trade and Industrial

Demographic Data. The answers to Questions 1-7 and 11 describe the graduates present occupational status and his occupational experiences since graduation.

Occupational Program/Occupation. Questions 8, 9, and 10 direct themselves to the relationship between the graduates occupational program and his present occupation, the placement activities of the high school, and the vocational program emphasis on attitudes concerning employee-employee and employee-employer relationships.

Satisfaction (Job). Questions 12a-12e deal with the graduates satisfaction with various aspects of his present job.

Satisfaction (High School/Occupational Program). Question 13a is related to the graduates entire high school education while Questions 13b-13d, and 14 are directed specifically to the high school occupational program, and the graduates satisfaction with these items.

Additional Survey Information. The survey questionnaire requested the name and address of the graduates present employer and immediate supervisor. This information being necessary as an input to the employer survey.

The students permission was requested prior to contacting the employer and THE EMPLOYER WAS CONTACTED ONLY IN THOSE CASES WHERE THE GRADUATE'S PERMISSION WAS GRANTED.

Employer Questionnaire

The employers questionnaire in Appendix E focused on the area of employee satisfactoriness. These survey results were correlated with the appropriate graduate response by the use of student "identifier" described in the preceding section.

The broad area of employee satisfactoriness was separated into two basic topics: skill and attitude.

Data Analysis

The results of both the graduate and the employer surveys were initially analyzed by using FORTRAN IV library program FRANM (12). This frequency analysis of multiple choice program was utilized to obtain: frequency distributions, means, and standard deviations. Additional outputs of this program were also used to determine response percentages.

Those survey questions having a Likert response were tested for significant differences between the means for the three groups being examined. The Behrens Fisher t test, FORTRAN IV library program UNPAIRED (13) was used for this analysis, and the means were tested for significance at the .05 level. The following responses were examined:

A. Graduate Survey
    1. Question 9
    2. Question 10
    3. Questions 12a, b, c, d, e
    4. Questions 13a, b, c, d

B. Employer Survey

1. Question 1

2. Questions 2a, b, c, d, e

3. Questions 3a, b, c, d, e

The responses to Question 14 of the graduate survey were tested for significant differences in the obtained response patterns by using the Chi-squared analysis at the .05 level.

Chapter IV

LIMITATIONS

As a result of interviews with the administration and staff of the survey schools and with students and employers involved in this survey the following limitations to this study have been identified.

The year 1971-72 was for many schools the first year of operation for a cooperative vocational education program. The coordinators were new to the job and the program was new to business and industry in the community. In many instances the scheduling problems encountered by AVTS/sending schools were severe; and the coordination of schedules between school and industry was equally difficult.

For one of the survey schools the 1971-72 school year was the first year of operation in a new school building. As a result the 1972 graduates of this school system had varied vocational backgrounds:

1. One year of vocational training (which would have taken place in the new school).
2. Three years of vocational training (one year in the new school and two years in another vocational system from which they had transferred).

In general 1972 was a year of growth in the Pennsylvania vocational programs, and cooperative vocational education, in its infancy, was growing rapidly.

This study has used as one of its vehicles for program evaluation, a survey of the graduates of the respective programs. In a sense this study compares the experiences, attitudes, and opinions of the graduates of the various programs. For this approach to be totally valid it

would be necessary for each student who wanted to be a part of the cooperative program to have had that opportunity. This is not always the case. Many schools will permit only their "best students" to enter the cooperative program, and in partial defense of this approach many employers will accept only the "best students." The group of students described as having "total in-school vocational training" is therefore made up of two groups.

1. Those who wanted the total in-school vocational program.
2. Those who had two years of in-school vocational training and had requested the cooperative program in their senior year, but were rejected because of past performance.

As was noted in the Review of the Literature, local economic conditions are important factors in the operation of any cooperative vocational education program. Economic conditions are, of course, very important factors relating to the probability of any vocational program graduate obtaining employment. Therefore, local economic conditions should be considered when comparisons are made between those schools and conditions described in this study and any other situation.

Chapter V

FINDINGS

These findings are based on the responses of the graduates and employers involved in this study. Useable responses were obtained from 67 percent of the graduates and 58 percent of their employers. The findings are as follows:

Graduate Survey

	Total In-school Vocational Training Program (INSKL)	Capstone Program (CAP)	Diversified Occupation Program (DO)
1. Present Status:			
Employed full-time	68%	72%	75%
Employed part-time	6%	6%	2%
Unemployed, looking for work	4%	2%	2%
Unemployed, not looking for work	4%	2%	9%
Military service	7%	7%	0%
College, full-time	6%	3%	5%
College, part-time	1%	1%	0%
School, (not college) full-time	1%	1%	0%
School, (not college) part-time	1%	1%	0%
Other (specify)	3%	4%	7%

The statistical abstract of the United States for the year 1973 lists the unemployment rate for those who graduated from high school in 1972 as 10.9 percent and the unemployment rate for those who dropped out of high school in 1972 as 19.2 percent. The results of this survey show that the graduates of the vocational programs have a much lower rate of unemployment than the national average for high school

graduates, with the capstone program graduates having the lowest unemployment rate of the three vocational programs examined by this study.

The fact that the employment rate for the vocational program graduates is relatively high is reflected in the low number continuing their education at this time. The respondents to this survey indicate that less than 10 percent of the graduates of any of the vocational programs are attending college or post-secondary institutions. These numbers are considerably less than the 30.2 percent of the United States population between the ages between 18 and 24 who are attending college.

2. Upon completion of your high school program, did you want to obtain employment in your field of occupational study?	(INSKL)	(CAP)	(DO)
Yes	65%	77%	59%
No	18%	10%	27%
Undecided	17%	13%	15%

Despite the relatively high employment rate it should not be assumed that successful completion of a vocational program assures employment in the trade area of ones choice. A comparison of the answers to Questions 2 and 9 would indicate that many who want to work in the area for which they have trained are working in non-related areas. The fact that 35 percent of the in-school vocational program graduates, 23 percent of the capstone program graduates, and 41 percent of the diversified occupation program graduates did not want to obtain employment in their field of occupational study might well be indicative of the need for an increased development of career awareness prior

to student selection of their occupational program. The survey respondents who are not interested in obtaining employment in their field of occupational study may be representative of those who completed programs which were second or third choices.

3. Had you obtained your first full-time job before leaving high school?	(INSKL)	(CAP)	(DO)
Yes	39%	69%	71%
No	61%	31%	29%

This survey shows that a much larger percentage of the cooperative program graduates obtained their first full-time job before leaving high school than did the graduates of the total in-school vocational training program. These findings are not totally unexpected since for many of the cooperative program graduates the first full-time job is an outgrowth of their training program.

The large percentages of cooperative program graduates having their first full-time job prior to graduation could be reflective of several additional factors:

1. The desire of employers to hire "experienced" personnel.
2. The cooperative program graduates are often more experienced in the job interviews than are the graduates of the total in-school vocational programs.

4. How many weeks after high school did you obtain your first full-time job?	(INSKL)	(CAP)	(DO)
0-2 weeks	24%	50%	14%
2-4 weeks	20%	15%	0%
4-8 weeks	16%	11%	50%
more than 8 weeks	40%	24%	36%

Whereas the response to Question 3 was suggestive of all cooperative program graduates having a high rate of employment prior to graduation, the response to Question 4 indicates that the capstone program graduates have a much higher degree of success in finding employment quickly, than do either the graduates of the total in-school program or the DO program. The difference between the graduates of the total in-school program and those who completed the capstone program could be indicative of the value industry places on experience. The differences between the capstone and the DO programs may reflect the fact that DO students are sometimes trained in areas of lesser numerical demand, and if they are not successful in obtaining full-time employment following graduation at their training station they may not find local employment in their area of interest. An example of this sort of situation might be a student who was trained to be a very competent watchmaker by the only watchmaker in town.

It should be noted that 4-8 weeks is the approximate duration of the summer vacation and it is not uncommon for a graduate who does not have continuing employment at graduation to postpone seeking employment until after the summer vacation.

5. How many full-time jobs have you had since finishing high school?	(INSKL)	(CAP)	(DO)
1 job	43%	46%	48%
2 jobs	35%	35%	33%
3 jobs	13%	13%	15%
more than 3 jobs	8%	6%	5%

There is very little difference in the employment patterns related to this question. The response to this question might best be viewed

in the light of Question 2 and 9 which indicate that many graduates who want to work in their field of occupational study have not been able to do so; therefore, they may view their initial jobs as interim positions.

The answers to survey Questions 6 and 7 are descriptive in nature and were compared with the graduates vocational curriculum to ascertain the validity of the responses to Question 9.

8. Were you introduced to your present job through your high school program?	(INSKL)	(CAP)	(DO)
Yes	15%	33%	26%
No	85%	67%	74%

This response is indicative of minimal job placement activity in the secondary school. The cooperative programs have somewhat higher responses, and this might be expected since in many instances the graduate is hired at his training station, but the relatively low ratings across the board seems to be identifying an area in vocational education where an increased emphasis is required.

9. To what extent did your high school occupational program teach you the skills required on your present job?	(INSKL)	(CAP)	(DO)
very much	16%	19%	15%
much	16%	17%	18%
some	25%	28%	15%
very little	10%	14%	23%
none	33%	22%	30%

There was a significant difference in the response pattern to this question when tested at the .05 level, with the graduates of the capstone program reporting a greater use of those skills acquired in their occupational program than did the graduates of the total

in-school vocational training program. Their was no significant difference between the response of the DO program graduates and either the capstone or the total in-school graduates.

Once again as was noted in discussing the response to Question 2 a fairly large percentage of graduates are not using the skills acquired in their occupational program on their present job.

10. To what extent did your high school program teach you how to get along with people on your present job?	(INSKL)	(CAP)	(DO)
very much	22%	19%	15%
much	20%	18%	28%
some	36%	39%	38%
very little	11%	14%	15%
none	11%	11%	5%

There was no significant difference observed in the response patterns to this question. The general indications are that the vocational programs are helpful in developing good inter-employee relationships.

11. In what range does your weekly salary fall (before deductions)?	(INSKL)	(CAP)	(DO)
less than $70	9%	8%	11%
$71 - $80	7%	5%	8%
$81 - $90	8%	3%	5%
$91 - $100	9%	6%	5%
$101 - $110	11%	6%	3%
$111 - $120	7%	9%	14%
$121 - $130	9%	8%	3%
$131 - $140	6%	6%	3%
$141 - $150	6%	8%	16%
$151 - $160	7%	14%	3%
$161 - $170	5%	4%	3%
$171 - $180	2%	7%	5%
$181 - $190	3	4%	0%
$191 - $200	2	3%	0%
over $200	5	10%	22%

The graduates of the capstone program, with an average weekly salary of $139, are earning more than either the DO program graduates

($136) or the graduates of the total in-school vocational program ($117). Once again the experience of the capstone graduates and the DO program graduates appears to be a very important factor.

12. On my present job, this is how I feel about:

(a) The chance to do something that makes use of my abilities.	(INSKL)	(CAP)	(DO)
very satisfied	28%	32%	42%
satisfied	41%	40%	32%
undecided	15%	12%	11%
dissatisfied	11%	10%	11%
very dissatisfied	5%	6%	5%

There was a significant difference observed in the response to this question with the capstone program graduates indicating a greater use of their abilities on the job than did the graduates of the total in-school program. There was no significant differences measured between the DO program graduates and the graduates of either of the other programs being examined. This response pattern is in agreement with the response to Question 9.

(b) The amount of pay I receive for the work I do.	(INSKL)	(CAP)	(DO)
very satisfied	15%	17%	16%
satisfied	45%	44%	42%
undecided	14%	16%	24%
dissatisfied	18%	19%	13%
very dissatisfied	7%	5%	5%

There was no significant difference in the response patterns to this question. The slightly higher degree of satisfaction for the cooperative program graduates would be expected in the light of the higher salaries being earned by these employees.

(c) The chances for advancement on this job.	(INSKL)	(CAP)	(DO)
very satisfied	17%	22%	26%
satisfied	35%	34%	26%
undecided	23%	16%	18%
dissatisfied	18%	18%	26%
very dissatisfied	8%	10%	3%

There was no significant difference in the responses to this question. Approximately one-half of the graduates expressed satisfaction with the chances for advancement on their job. Many are undecided or dissatisfied and this might be expected since many have indicated that they are not working in their area of interest.

(d) The working conditions.	(INSKL)	(CAP)	(DO)
very satisfied	28%	22%	21%
satisfied	50%	50%	47%
undecided	10%	14%	13%
dissatisfied	9%	8%	8%
very dissatisfied	4%	6%	11%

A large number of graduates seem to be satisfied with their working conditions, with no significant differences observed in the response patterns.

(e) The feeling of accomplishment I get from the job.	(INSKL)	(CAP)	(DO)
very satisfied	23%	28%	24%
satisfied	50%	43%	58%
undecided	16%	15%	8%
dissatisfied	7%	9%	5%
very dissatisfied	4%	6%	5%

Approximately three-quarters of the respondents indicated that they were satisfied with the feeling of accomplishment they get from their job. When this is coupled with their feelings related to working conditions and salary, it appears that the respondents to this survey are generally satisfied with their entry into the world of work.

13. How satisfied are you with the following:

(a) Your high school education?	(INSKL)	(CAP)	(DO)
very satisfied	21%	20%	19%
satisfied	50%	52%	45%
undecided	13%	13%	17%
dissatisfied	12%	12%	14%
very dissatisfied	3%	4%	5%

(b) The type of high school occupational program you were enrolled in? (i.e., total in-school occupational training, in-school occupational training with senior year cooperative work experience, no in-school occupational training - total cooperative work experience program.)	(INSKL)	(CAP)	(DO)
very satisfied	24%	31%	27%
satisfied	51%	49%	54%
undecided	15%	10%	15%
dissatisfied	7%	7%	5%
very dissatisfied	2%	2%	0%

The graduates generally expressed a feeling of satisfaction with both their overall high school education and their occupational program. The capstone graduates were found to indicate a significantly greater degree of satisfaction with their occupational program than did those who completed the total in-school program. This could well be dependent upon the higher number of capstone graduates who are working in their chosen field, and receiving more pay.

(c) The content of your high school occupational program?	(INSKL)	(CAP)	(DO)
very satisfied	20%	19%	21%
satisfied	54%	57%	50%
undecided	14%	11%	12%
dissatisfied	11%	11%	14%
very dissatisfied	1%	2%	2%

(d) The quality of your high school occupational program?	(INSKL)	(CAP)	(DO)
very satisfied	24%	24%	24%
satisfied	52%	55%	46%
undecided	12%	12%	22%
dissatisfied	10%	8%	5%
very dissatisfied	2%	2%	2%

The response to this question indicates that there is a relatively high degree of satisfaction with the content and the quality of the high school occupational programs, with no significant differences observed in the responses of the three program types.

14. Knowing what you now know about your high school program and the world of work, would you recommend the program you completed to a good friend?	(INSKL)	(CAP)	(DO)
Yes	76%	87%	80%
No	24%	13%	20%
If "No", what program would you suggest?			
Vocational program (total in-school vocational training, no cooperative work experience)	0%	12%	0%
Vocational program (in-school vocational training followed by cooperative work experience in the senior year)	47%	0%	56%
Vocational program (total cooperative work experience, with school programmed related theory)	27%	43%	0%
College preparatory	13%	17%	22%
Other (specify)	14%	29%	22%

There was a significant difference observed in the response patterns to this question, with the capstone program graduates voicing the

strongest recommendation for their program. It should be noted however that a large majority of the graduates responding to this survey would recommend their program to a friend. Those who would recommend a change voted rather strongly in favor of a cooperative program.

Employer Survey

In discussing the results of the employers survey it should be noted that the number of responses from employers of DO program graduates was quite small, and as a result tests for significant differences between the DO program and the others being examined would have little validity. It should be noted however that the employers of DO program graduates who responded consistently rated their employees highly.

	Total In-school Vocational Training Program (INSKL)	Capstone Program (CAP)	Diversified Occupation Program (DO)
1. How much did this person's vocational or technical training influence your decision to hire him?			
very much	14%	13%	0%
much	22%	33%	20%
some	32%	28%	80%
little	13%	13%	0%
none	18%	11%	0%

When viewing these figures one might keep in mind that many of the graduates are not working in the area for which they had trained. However the training was in general an influencing factor.

2. To what extent did the person demonstrate the following traits when he/she was first employed by your company?

(a) Demonstrated the skills and abilities needed for the job	(INSKL)	(CAP)	(DO)
very much	14%	20%	20%
much	36%	46%	40%
some	39%	22%	40%
little	10%	4%	0%
none	2%	7%	0%

The employers appear to be satisfied with the background of these employees. It should be noted however that many are working at entry level positions with some of the jobs being unrelated to the area of study.

(b) Demonstrated positive attitudes toward the job	(INSKL)	(CAP)	(DO)
very much	31%	39%	40%
much	43%	41%	60%
some	21%	13%	0%
little	4%	7%	0%
none	1%	0%	0%

The vocational graduates received high scores across the board in this area which many employers noted as THE MOST IMPORTANT.

(c) Demonstrated ability to work with minimum supervision	(INSKL)	(CAP)	(DO)
very much	20%	31%	20%
much	35%	33%	40%
some	30%	19%	40%
little	13%	17%	0%
none	2%	0%	0%

The ability to work with minimum supervision was rated quite high for most graduates with the cooperative program graduates scoring slightly higher in this area where experience could be a factor.

(d) Demonstrated problem-solving abilities	(INSKL)	(CAP)	(DO)
very much	12%	11%	20%
much	28%	30%	20%
some	36%	44%	60%
little	19%	15%	0%
none	5%	0%	0%

The vocational graduates generally demonstrated good problem-solving abilities. It should be noted that some of the entry level tasks might provide very few opportunities to demonstrate these abilities.

(e) Demonstrated cooperative working relationships	(INSKL)	(CAP)	(DO)
very much	35%	46%	20%
much	41%	30%	80%
some	19%	22%	0%
little	4%	2%	0%
none	1%	0%	0%

In this very vital area the employers appear to be well satisfied with all graduates. The cooperative program graduates were rated slightly higher in this area.

3. To what extent has this person progressed in competency in the following traits since becoming an employee of your company?

(a) Progressed in essential skills and abilities.	(INSKL)	(CAP)	(DO)
very much	41%	44%	60%
much	33%	39%	40%
some	20%	17%	0%
little	5%	0%	0%
none	2%	0%	0%

(b) Progressed in attitude toward the job	(INSKL)	(CAP)	(DO)
very much	34%	43%	40%
much	34%	33%	60%
some	20%	15%	0%
little	9%	9%	0%
none	3%	0%	0%

(c) Progressed in ability to work with minimum supervision	(INSKL)	(CAP)	(DO)
very much	34%	41%	40%
much	30%	37%	60%
some	20%	15%	0%
little	11%	6%	0%
none	5%	2%	0%

(d) Progressed in problem-solving abilities	(INSKL)	(CAP)	(DO)
very much	25%	28%	40%
much	31%	33%	40%
some	28%	30%	20%
little	10%	7%	0%
none	6%	2%	0%

(e) Progressed in cooperative working relationships with other employees	(INSKL)	(CAP)	(DO)
very much	39%	49%	40%
much	39%	32%	40%
some	16%	17%	20%
little	4%	2%	0%
none	6%	0%	0%

The indications are that the vocational graduates have shown much progress in the world of work. There are two areas where the capstone graduates were rated significantly higher than the graduates of the total in-school vocational program, 13a and 13c. These areas could well reflect the additional on-the-job experience of the capstone graduate and the fact that to a greater degree he is working in the area for which he trained.

4. Now would you please consider this worker with respect to his over-all competence, the effectiveness with which he performs his job, his proficiency, and his general over-all value. With all these factors in mind, where would you rank this worker as compared with the other people

of similar experience whom you now have doing the same work--or if he is the only one doing this type work, how does he compare with those who have done the same work in the past?	(INSKL)	(CAP)	(DO)
In the top 1/4	47%	44%	80%
In the top half but not among the top 1/4	32%	41%	20%
In the bottom half but not among the lowest 1/4	17%	13%	0%
In the lowest 1/4	4%	2%	0%

The employers have consistently ranked the graduates of the vocational programs quite high. The DO program graduates being ranked extremely high in this category.

Graduate and Employer Comments

The survey questionnaires were developed so that they could be completed with little written comment and generally required only a series of checkmarks. However, there were a significant number of comments on the graduate returns (see Appendix A). These responses were mostly in connection with questions related to satisfaction with their school program. The comments usually (about six to one) expressed a negative attitude towards some facet of their program or the teaching in their program. For the most part, the in-school vocational students were in some way criticizing their instructors and/or the shop, or lab program. The graduates of the total in-school vocational program were most critical of their vocational instructors. It should be noted that two years have elapsed since these graduates completed their high school program. This would tend to indicate that they had extremely strong sentiments about the questions to put their responses in writing. The employers also made comments but relatively

few (see Appendix A). You will also note that these comments were generally negative but with too few to make any judgments.

Chapter VI

SUMMARY AND RECOMMENDATIONS

Summary

Graduates of the vocational programs in Pennsylvania's secondary schools (1972) appear to have had little difficulty entering the world of work. This seems particularly true of those graduates with skills acquired in a cooperative vocational education program. For many of the cooperative program graduates (70 percent) the first full-time job was acquired prior to leaving high school, and was in many cases an outgrowth of their training program.

Although not all graduates who want to obtain employment in their field of occupational study have done so at this date, a larger percentage (70-80 percent) are making use of the skills acquired as a result of their high school occupational program. The graduates of the capstone program indicated a greater ability to find work quickly, and in an area related to their field of interest than did the graduates of the other programs surveyed. It has long been known that experience is a great teacher - perhaps it is the preferred teacher.

The skills acquired in vocational education programs do not go unrewarded. This is particularly true of the graduates of the cooperative programs. The graduates of the capstone programs report weekly earnings of $139, with the DO program graduates earning $136, and the total in-school vocational program graduates $117. The higher salaries and the greater ability to find work related to their areas of interest seem to be reflected in the graduates degree of satisfaction both with jobs and vocational programs. The graduates of the cooperative programs

indicated a greater degree of satisfaction than the graduates of the total in-school vocational program, with the capstone program graduates reporting a slightly higher degree of satisfaction than the DO program graduates.

The employers opinion of the vocational program graduates in his employ is perhaps best summed up by the response to Question 4. All (100 percent) of the DO program graduates were rated above average in their over-all job competence effectiveness and proficiency. Eighty-five (85) percent of the capstone program graduates, and seventy-nine (79) percent of the total in-school vocational program graduates were rated above average in these areas by their employers.

The findings of this survey indicate that graduates of the cooperative vocational programs have a better preparation for the world of work than those having only the in-school vocational training. This is verified by the opinions of the graduates, the opinions of the employers, and the salaries paid to the respective program graduates.

Recommendations

Since cooperative occupational programs appear to be highly regarded by many students and the graduates of these programs rated quite highly by their employers it would seem reasonable that more students be provided the opportunity to have this experience.

This increase should be an increase in scope and not merely numbers. There is reason to believe that many schools in many states utilize the cooperative approach as a means of training only the very best students. However, the Vocational Education Act of 1963 and the Amendments of 1968 seem to be speaking to a much larger clientele.

Indeed, the group most often rejected by some cooperative programs is the group singled out by the amendments as those who should receive priority - the student encountering problems with school and the normal school setting.

The expansion of cooperative programs to better serve all students would not be easy. It would undoubtedly require greater efforts in placement and may indeed require some techniques not presently utilized in the average cooperative program. If the increased efforts result in better trained, better satisfied graduates - and citizens, the rewards will by far exceed the efforts.

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APPENDIX A

Representative Comments From Graduates and Employers

REPRESENTATIVE COMMENTS FROM

GRADUATES AND EMPLOYERS

The following unsolicited comments are representative of those received in the graduate and employer survey. These comments are identified by a modified "student identifier," which will indicate "type of program" and "curriculum."

Graduates' Comments

Senior year of high school helped very much in deciding occupational plans (----7232).

Even though part-time job through the vocational program taught me very little about my job now, I was very thankful for it. The job experience alone was enough to help me get the job I wanted (----7222).

Find out from local employers where they will need workers in the next few years and teach these skills at the vo-tech school for those jobs (----7216).

I believe that your survey should ask some questions about the administrative aspects of my education (----7216).

I don't consider my wasted years in high school as an education but as an obstacle course. While in high school, the only thing I worked for was getting a diploma, not education. You learn faster when you are out of school because then, learning isn't manditory. I hated school, never got "mug shots" in stupid year books. Didn't go to ceremony where you wear a black monkey suit with a square hat. Vo-tech never had anything to offer me. I liked carpentery, so I took woodshop. They made you build little houses and do things that were boring, so I went into Commercial Arts because I liked to draw. Got

good grades, but after I got out of school, I never wanted to pick up another paint brush, let alone draw a picture. Because of this, I skipped often and took off enough days so I could at least bare through. So I was mighty glad when I got that piece of toilet paper called a diploma (----7216).

I'd recommend more of a specialty than a variety (----7223).

High school program introduced me to no jobs. Have teachers that know what they are doing (----7223).

Very sorry I chose retailing course as my vocational program. No use to me now. Sorry I did not take complete secretarial program (----7223).

More stress on accuracy (secretarial program), should learn more about office not just classroom (----7212).

I think anyone of the vocational fields at my high school would be good (----7212).

Would recommend business, but was not satisfied with college preparatory program (----7212).

A better vocational program with better more experienced teachers (----7216).

I would not recommend my field because the field of floriculture is hard to get into at present. Just look into all possibilities, because one must have a very open view when trying to find your place in society and the job world (----7211).

Now a days you need something extra, especially if the man of the house would get sick (----7211).

I would not want them to take the course at Vo-tech that I took. But it's really a good program if you get into the right field (----7213).

The vocational program is very good but teachers should be chosen more carefully. (It makes all the difference in the world.) (----7213)

Would like to cover more practical everyday financial necessities such as more indepth study of tax requirements and personal banking involvement (loans, interest, mortage) (----7213).

I can't say that I know that much about my high school program having not applied myself very well (----7216).

Most Vo-tech schools give theory and experience, but give little or no time as to troubleshoot. They don't have time for anything but principles of operation. People that benefit, know what they are doing before they go. Very dissatisfied with all of them because if you know nothing when you go you don't gain anything and I put my heart into everything I do (----7216).

I was very pleased with my Vo-tech program. I worked at a job in my field of horticulture for over a year, at the end of that time I had become foreman. I now have moved and started a Garden Center & Nursery of my own. My opening date is April 15, 1974 (----7221).

I would recommend same program but different occupation with a better teacher (----7216).

Go out and get a job where you get paid for your work (----7216)!

I'd suggest a Vo-tech course only if I could get in the field in which I would like to work in. In going in Vo-tech you should get one choice, if that would be filled DO NOT TAKE ANOTHER COURSE, JUST TO GET A TRADE (----7216).

Better instructors who fully understand the vocation themselves, also they must fully instruct the student (----7216).

More money should be allocated for more modern equipment in vo-tech schools (----7226).

More technical manuals should be made available to the students (----7216).

Was enrolled in three year food service and management program - fabulous - truely learned and enjoyed experience. Haven't found decent paying position for which trained (----7216).

Free school for good friends (----7226).

Enjoyed and learned much in vocational program. Never want to work in sewing factory, which was all the program can offer (----7226).

I would advise going thru high school with vocational training and furthering their education in college (----7226).

Find student place to put to use knowledge they were taught at vo-tech schools. Does not train students for a second chance to find a place in the working field (----7226).

I recommend vocational program for the entire school day, with heavy emphasis on math (related to field or not) then followed by cooperative work experience in the senior year (----7216).

In vo-tech school I had Data Processing and I have found the job opportunities in that field are very slim (----7216).

Before attending the vocational school I had no idea of what I was going to do with my life but now I have set some goals and have some direction (----7214).

I would like to know how the selected group of graduates was picked (----7216).

I was working in my field of study and would have liked to stay in but it wasn't enough money. I would like to go back into it after marriage and might open my own shop (----7216).

N.O.Y.B. (none of your business) to number 1, 6, 7 and 11. Also did not give employer's name and address (----7216).

Needed more supervision and organization of program, more knowledge of what hairdressing is like in a shop itself (----7216).

I would like to tell you that I did take a vocational course. The course was plumbing. I tried for at least 1-1/2 years and I didn't like it. I am satisfied where I am now (----7216).

Teachers who are more concerned about the students welfare: example 1) making them develop more speed and accuracy which is required on the job, 2) helping secure jobs after training so that it will not be wasted, 3) more concentration on actual work and less on term papers such as "Chemical composition of shampoo" and more like "Theory on hair coloring" (----7216).

Dear Sir: Would you please send me any material that you have on a computer programming course. Thank-you (----7222).

We never learned how to make the best of things (even when the times are rough - although school made everything seem like it was all "peaches n' cream"). I feel I could have learned more by being put into situations, rather than by trying to imagine and wonder what would I do until after graduation. When I can practice what I know and learn. I will learn something everyday until the day I die. Learning never ceases (----7222)!

Vo-tech schools shouldn't be built up as much as they are (----7216).

When I entered vo-tech I was told how well I would be making out; I've been out on my own for 1-1/2 years doing my own work and decision making. I'm married, with a son and only take home $85 a week (----7226).

I feel that there could be a better program. The half day at the home school and half day at vo-tech just does not work out. Lost to much time out of the classroom going from one school to another (----7226).

Wouldn't recommend any program. No two people's interests are totally the same, person has to decide mainly for him or herself (----7226).

There was no theory, entirely to much work without knowledge (----7226).

I would like to work in my field but the salary, working conditions, advancement, benefits around my home town are not for my occupation (high school) what they are at my present job (----7216).

I enrolled in an occupational program to get away from the regular classes. I have now found it was a mistake for myself (----7216).

Quit school as soon as possible (----7211)!

It's awful hard to learn from a teacher who disrespects you and is trying to bust you (----7211)!

On the job training is the only way (----7226).

Wish I would have studied more. Our instructors didn't teach us anything (----7226).

I will not consent to my employer because "I have no faith in so called confidential status" (----7216)!

When in vo-tech school having trouble with teacher. Feels vo-tech has come a long way since graduation. Even though dissatisfied with program, would recommend vo-tech to a friend as long as they are sure what kind of work they want. A lot of kids jumped at chance of vo-tech: 1) New, 2) One way of only 1/2 day of high school classes. Many found it difficult to handle or became bored. I was interested, but teacher did poor job of teaching class. Feel it's wrong to give student 2nd choice at what program they would like if accepted in vo-tech (----7215).

Program of electronics was taught very well, but for that type of work you need more than just one year and you need a degree an employer would trust (----7216).

Revise whole school system so some children start at older age. Thus when the child is in 9th grade when he has to make decisions of type of course he would like to enroll in he knows more of what he would like to do. Also unlimited number of creative art courses and available for expansion with greater chance to expand perspective so at the time of graduation he is better prepared to deal with the people of the world and will be starting at point 10 instead of point one. Think of how much farther America could be in all fields (also social revolution would be excelerated) if the high school graduates could at the time of graduation jump right into a field of work he has total interest in (the young mind is so creative, it's unfortunate the world looses so many ideas in those years of indeciveness many present high school kids are experiencing) (----7212).

Like myself, many of my friends can not possibly be expected to know what field of endeavor is most suited to their respective personalities, goals, and philosophies, prior to actual experience (----7216).

Vo-tech was a very big help to me (----7226).

High school program was very boring and uninteresting in what I wanted to learn. When my chance to attend vo-tech - found such a situation very helpful (----7216).

Should not have cosmetology in vo-tech school at all. Liked the fact of chance to take a vocational training course. Not enough discipline in course - roam through halls, entering other classes. Teacher knew as much about subject as students - nothing. Learned more from substitute and night school. Not fully attended vo-tech school - if it had not been for the school, I would not have been able to afford to learn a trade and I also would not be able to have the job that I have now (----7216).

Two year program I completed was not oriented towards finding a job in that occupation once graduated. Training was not adequate to prepare for job (----7212).

School had worthwhile program. High school can't give complete program but with vo-tech school - can come pretty close (----7212).

Employers want experienced help but aren't willing to give you the experience (----7216).

Please do not send any more forms. I didn't use what I learned in vo-tech. I am an apprentice electrician - I took Data Processing in school (----7216).

High school courses helped much in preparing for college. Vo-tech teacher taught me separate from rest of class - it was a drafting course (mechanical) I was uninterested so he gave me arch drafting instead like I asked him to do (----7216).

Vo-tech commercial art class had no or very little affect as job experience anywhere and everywhere I've looked - college or nothing (----7216).

More experience would be obtained by performing job related tasks (----7216).

You learn very little out of a book about carpentry as far as getting on the job and getting it done (----7216).

However, I feel that most of the vocational teaching should be given in the classroom by qualified teachers (----7226).

Go out to plants and see how certain jobs are done. I found this very good in learning things about certain jobs. I recommend to take a few tours during the year (----7216).

Employers' Comments

Miss ------- is too quiet - give very little feed-back (----7212).

He now heads an installation crew with one or two helpers. (----7216).

This former employee had very good attitude, but lacked mechanical ability necessary for the job (----7216).

He is an average carpenter, but no consideration (----7226).

He is no longer employed by us (----7216).

Since the employee received his vo-tech training in the electrical shop, but is not doing this type of work it is impossible to evaluate his training in relation to the job (----7226).

Miss ----- is not doing the work that she prepared for at your school. She is a food service worker in a hospital. I rated her as a food service worker (----7226).

Accepted job not related to training (----7216).

One of the best (----7216).

Had no direct contact with co-op supervisor for entire period (----7231).

Not employed any more (----7214).

This employee is not working in the field he had taken at vo-tech presently. He is however a satisfactory employee and does his job well on a production line (----7216).

If the Department of Education is really concerned about superior education, they might do well to encourage the creation of conditions that will allow children to work more freely at earlier ages. Certainly there are risks but the benefits far outweigh the risks. If a child has not learned to enjoy the responsibilities of work by age 16, it is generally difficult after that (----7216).

This is not a reflection on vo-tech training - ---- seemed to loose interest in his (----7216).

This employee is no longer with us (----7216).

This person is no longer with us. A conflict in his actions and attitudes made it necessary for us to let him go (----7216).

Unfortunately, ---- is still attending a technical school and evaluation of him is based only on his activities in the janatorial/ maintenance functions. I definitely would hire him as a technician's assistant but he is planning to continue his studies (----7216).

------ is my <u>son</u>. He grew up on the farm, though has many other interests. Real good worker, he has great mechanical interests. He is our fix-it boy. He beats me all hollow (----7216).

I was not aware he had technical training when I hired him (----7216).

APPENDIX B

Letters of Transmittal - Graduate Survey

THE PENNSYLVANIA STATE UNIVERSITY
247 CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Education
Department of Vocational Education

April, 1974

Dear Graduate:

It is now over a year since you completed high school and your occupational preparation program. The Pennsylvania Department of Education is very much interested in your experience since graduation. Therefore, your high school and the Penn State Department of Vocational Education are cooperating on a follow-up survey of a selected group of graduates from the class of 1972.

The information you provide will help in the evaluation of the effectiveness of your high school program. And will provide a basis for improving future occupational programs.

Please complete and return this questionnaire in the enclosed stamped self-addressed envelope. It should take approximately 5-10 minutes.

All information is strictly confidential and your name will not be associated with the information you give.

Thank you for your valuable assistance.

Sincerely yours,

Frederick G. Welch

Frederick G. Welch
Chairman, Undergraduate Studies
and Continuing Education

FGW/pes
Enclosures

THE PENNSYLVANIA STATE UNIVERSITY
247 CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Education
Department of Vocational Education

May, 1974

Dear Graduate:

Approximately three weeks ago the Department of Vocational Education sent to you a questionnaire.

As was noted at that time, the Pennsylvania Department of Education is very much interested in your experiences since graduation. Therefore your high school and the Penn State Department of Vocational Education are cooperating on a follow-up survey of a selected group of graduates from the class of 1972. Since we have not received your response to our first request, we are sending along a second questionnaire.

The information you provide will help in the evaluation of the effectiveness of your high school program. And will provide a basis for improving future occupational programs.

Please complete and return this questionnaire in the enclosed stamped self-addressed envelope. It should take approximately 5-10 minutes.

All information is strictly confidential and your name will not be associated with the information you give.

Thank you for your valuable assistance.

Sincerely yours,

Frederick G. Welch

Frederick G. Welch
Chairman, Undergraduate Studies
and Continuing Education

FGW/pes
Enclosures

THE PENNSYLVANIA STATE UNIVERSITY
247 CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

College of Education
Department of Vocational Education

May, 1974

Dear Graduate:

I would like to thank you for your response to the survey questionnaire you received a few weeks ago. The information you provided will assist us greatly in the evaluation of occupational programs in Pennsylvania.

In order that we might further evaluate the effectiveness of your high school program we are planning a survey of the employers of your graduating class. And with your permission we would like to include your employer in this phase of the study. This questionnaire, like all other information received on this study will be CONFIDENTIAL. Your cooperation will be greatly appreciated.

Sincerely yours,

Frederick G. Welch
Chairman, Undergraduate Studies
and Continuing Education

FGW/pes
Enclosure

Please check your desired response and return this form in the enclosed stamped self-addressed envelope:

I will ☐, I will not ☐, consent to my employer being contacted by the Penn State Department of Vocational Education.

Your signature please _____

_____
(identifier)

APPENDIX C

Graduate Questionnaire

Identifier:_____ Graduate's Name:_____

Present Employer's Name and Address:_____
(name)

_____
(street) (city) (state) (zip)

Immediate Supervisor:_____

1. Present Status:

____Employed full-time	____College, full-time
____Employed part-time	____College, part-time
____Unemployed, looking for work	____School, (not college) full-time
____Unemployed, not looking for work	____School, (not college) part-time
____Military service	____Other (specify)_____

2. Upon Completion of your high school program, did you want to obtain employment in your field of occupational study?

____Yes ____No ____Undecided

3. Had you obtained your first full-time job before leaving high school?

____Yes ____No

(If "Yes", go to Question 5 - If "No", go to Question 4)

4. How many weeks after high school did you obtain your first full-time job?

____0-2 weeks ____2-4 weeks ____4-8 weeks ____more than 8 weeks

5. How many full-time jobs have you had since finishing high school?

____1 job ____ 2 jobs ____3 jobs ____more than 3 jobs

6. What is your present job title?_____

7. Briefly describe your duties on your present job._____

_____

8. Were you introduced to your present job through your high school program?

____Yes ____No

9. To what extent did your high school occupational program teach you the skills required on your present job?

____very much ____much ____some ____very little ____none

10. To what extent did your high school program teach you how to get along with people on your present job?

____very much ____much ____some ____very little ____none

11. In what range does your weekly salary fall (before deductions)?

____less than $70	____$111 - $120	____$161 - $170
____$71 - $80	____$121 - $130	____$171 - $180
____$81 - $90	____$131 - $140	____$181 - $190
____$91 - $100	____$141 - $150	____$191 - $200
____$101 - $110	____$151 - $160	____over $200

12. On my present job, this is how I feel about:

(a) The chance to do something that makes use of my abilities.

___very satisfied ___satisfied ___undecided ___dissatisfied ___very dissatisfied

(b) The amount of pay I receive for the work I do.

___very satisfied ___satisfied ___undecided ___dissatisfied ___very dissatisfied

(c) The chances for advancement on this job.

___very satisfied ___satisfied ___undecided ___dissatisfied ___very dissatisfied

(d) The working conditions.

___very satisfied ___satisfied ___undecided ___dissatisfied ___very dissatisfied

(e) The feeling of accomplishment I get from the job.

___very satisfied ___satisfied ___undecided ___dissatisfied ___very dissatisfied

13. How satisfied are you with the following:

(a) Your high school education?

___very satisfied ___satisfied ___undecided ___dissatisfied ___very dissatisfied

(b) The type of high school occupational program you were enrolled in? (i.e. total in-school occupational training, in-school occupational training with senior year cooperative work experience, no in-school occupational training - total cooperative work experience program.)

___very satisfied ___satisfied ___undecided ___dissatisfied ___very dissatisfied

(c) The content of your high school occupational program?

___very satisfied ___satisfied ___undecided ___dissatisfied ___very dissatisfied

(d) The quality of your high school occupational program?

___very satisfied ___satisfied ___undecided ___dissatisfied ___very dissatisfied

14. Knowing what you now know about your high school program and the world of work, would you recommend the program you completed to a good friend?

_____Yes _____No

If "No", what program would you suggest?

_____vocational program (total in-school vocational training, no cooperative work experience)

_____vocational program (in-school vocational training followed by cooperative work experience in the senior year)

_____vocational program (total cooperative work experience, with school programmed related theory)

_____college preparatory

_____other (specify)_____

APPENDIX D

Letter of Transmittal - Employer Survey

THE PENNSYLVANIA STATE UNIVERSITY
COLLEGE OF EDUCATION
247 CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

Department of
Vocational Education
Area Code 814
865-2597

COLLEGE OF EDUCATION 1923 — 1973

June, 1974

Dear Employer:

The Pennsylvania Department of Education is very much interested in the quality of the various types of vocational programs offered in our State. Therefore, a selected group of high schools, their graduates from the class of 1972, and the Penn State Department of Vocational Education have been cooperating on a follow-up survey.

As part of our survey we requested permission to contact the graduates' employer. One of your employees was a part of our survey and with their permission we are submitting to you the enclosed survey form.

The information you provide will help in the evaluation of the effectiveness of the various types of high school programs. And will provide a basis for improving future occupational programs.

Although the questions refer to the employee named on the questionnaire your response will be coded so that only the program identifier related to your employee will be used.

All information is strictly confidential, neither your name nor your employee's name will be associated with the information you give.

For your convenience a stamped self-addressed envelope has been enclosed.

Thank you for your valuable assistance.

Sincerely yours,

Frederick G. Welch
Chairman, Undergraduate Studies
and Continuing Education

JMS/pes
Enclosures

APPENDIX E

Employer Questionnaire

CONFIDENTIAL

TO THE EMPLOYER OR SUPERVISOR: As part of our evaluation of Pennsylvania's Occupational Programs, we need your response to a few questions concerning the following employee.

EMPLOYEE:_____ PROGRAM IDENTIFIER:_____

1. How much did this person's vocational or technical training influence your decision to hire him?

_____very much _____much _____some _____little _____none

2. To what extent did the person demonstrate the following traits when he/she was first employed by your company?

	very much	much	some	little	none
a) Demonstrated the skills and abilities needed for the job	___	___	___	___	___
b) Demonstrated positive attitudes toward the job	___	___	___	___	___
c) Demonstrated ability to work with minimum supervision	___	___	___	___	___
d) Demonstrated problem-solving abilities	___	___	___	___	___
e) Demonstrated cooperative working relationships	___	___	___	___	___

3. To what extent has this person progressed in competency in the following traits since becoming an employee of your company?

	very much	much	some	little	none
a) Progressed in essential skills and abilities	___	___	___	___	___
b) Progressed in attitude toward the job	___	___	___	___	___
c) Progressed in ability to work with minimum supervision	___	___	___	___	___
d) Progressed in problem-solving abilities	___	___	___	___	___
e) Progressed in cooperative working relationships with other employees	___	___	___	___	___

4. Now would you please consider this worker with respect to his over-all competence, the effectiveness with which he performs his job, his proficiency, and his general over-all value. With all these factors in mind, where would you rank this worker as compared with the other people of similar experience whom you now have doing the same work--or if he is the only one doing this type work, how does he compare with those who have done the same work in the past?

_____In the top 1/4

_____In the top half but not among the top 1/4

_____In the bottom half but not among the lowest 1/4

_____In the lowest 1/4